



Mellanox MLNX-OS® Release Notes for IBM SX90Y3452

Software Ver. 3.4.0000

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1 Introduction

This document is the Mellanox MLNX-OS® Release Notes for IBM SX90Y3452.

MLNX-OS is a comprehensive management software solution that provides optimal performance for cluster computing, enterprise data centers, and cloud computing over Mellanox SwitchX® family. The fabric management capabilities ensure the highest fabric performance while the chassis management ensures the longest switch up time.

The MLNX-OS documentation package includes the following documents:

- User Manual – provides general information about the scope, organization and command line interface of MLNX-OS as well as basic configuration examples
- Release Notes – provides information on the supported platforms, changes and new features, and reports on software known issues as well as bug fixes

2 Supported Platforms, Firmware, Cables and Licenses

2.1 Supported Switch Systems

Table 1 - Supported Switch Systems

Model Number	Description
SX90Y3452	32-Port 56Gb/s FDR InfiniBand Blade Switch System

2.2 Supported CPU Architecture

- PPC 460 CPU families

2.3 Supported Firmware

- SwitchX® firmware version 9.2.9190
- SwitchX-2 firmware version 9.2.9190
- ConnectX®-2 firmware version 2.9.1200 and higher
- ConnectX-3 firmware version 2.30.8000 and higher

2.4 Supported Mezzanine

- ConnectX-2, Mezzanine P/N 90Y3460 (MalayaP), 2.9.1316 and higher
- ConnectX-2, Mezzanine P/N 90Y3480 (MalayaP-Net), 2.9.1318 and higher
- ConnectX-3, Mezzanine P/N 90Y3488 (Merlin), 2.32.5100 and higher
- ConnectX-3, Mezzanine P/N 90Y3484 (Nevada), 2.32.5100 and higher
- ConnectX-3, Mezzanine P/N 90Y3456 (MalayaX), 2.32.5100 and higher
- ConnectX-3, Mezzanine P/N 90Y3468 (MalayaX-Net), 2.32.5100 and higher

2.5 Supported CPLD Version

- 1.0.18

2.6 Supported Software Licenses

For the software licenses supported with MLNX-OS® software please refer to the “Licenses” section of the “Getting Started” chapter of the *Mellanox MLNX-OS User Manual*.

2.7 Upgrade From Previous Releases

Older versions of MLNX-OS may require upgrading to one or more intermediate versions prior to upgrading to the latest. Missing an intermediate step may lead to errors. Please refer to Table 2 to identify the correct upgrade order.

Table 2 - Supported Software Upgrades for SX90Y3452

Target Version	Verified Versions From Which to Upgrade
3.4.0000	3.3.5066; 3.3.4402
3.3.5066	3.3.4402; 3.3.4100
3.3.4402	3.3.4100; 3.3.3706
3.3.4100	3.3.3706; 3.2.0596-1
3.3.3706	3.2.0596-1; 3.2.0596
3.2.0596-1	3.2.0596; 3.2.0291
3.2.0596	3.2.0291

For upgrade instructions refer to the section “Upgrading MLNX-OS Software” in *Mellanox MLNX-OS User Manual*.

2.8 Supported Cables

For a list of the Mellanox supported cables please visit the LinkX™ Cables and Transceivers page of the Mellanox Website at http://www.mellanox.com/page/cables?mtag=cable_overview.



When using Mellanox AOC cables longer than 50m use one VL to achieve full wire speed.

3 Changes and New Features

Table 3 - IBM SX90Y3452 Changes and New Features

Category	Description
Release 3.4.0000	
Configuration Management	Upgraded to VPD version 2.05.
General	Added support for Mellanox OFED 2.3 integration.
Interconnect	Added support for LR4 modules.
WebUI	Added support for Internet Explorer 11 web browser.
Release 3.3.5066	
General	Bug fix.
Release 3.3.5060	
General	Improved cable info read response time. See the command “show interfaces {ib eth} transceiver”.
SNMP	Added cable info entries to entPhysicalTable.
SNMP	Added support for SNMP to trigger SNMP test trap via SNMP set command. See section “MLNX-EFM MIB”.
SNMP	Added system identifier (MAC address) to test trap.
Security	Added support for NIST 800-131A.
Release 3.3.4402	
General	The command “show configuration full” is no longer supported.
CLI	Added support for output filtering. See section “Command Output Filtering” in the User Manual.
Release 3.3.4350	
General	Added new certificate hashing algorithm (sha256). See section “Cryptographic (X.509, IPSec)” in the User Manual
Release 3.3.4302	
General	Added End-User License Agreement. See section “Getting Started” in the User Manual.
General	Improved configuration file format.
Power Management	Added support for link width reduction.
Puppet Agent	GA support for Puppet. See section “Puppet Agent” in the User Manual.
Release 3.3.4150	

Table 3 - IBM SX90Y3452 Changes and New Features

Category	Description
General	Improved configuration file format.
Release 3.3.4102	
General	Bug fixes.
Release 3.3.4100	
General	Improved debug file upload mechanism. Refer to “file debug-dump” command in the CLI reference guide.
General	Added support for displaying system hardware revision. Refer to “show inventory” command in the CLI reference guide.
SNMP	Added a new extension to entity physical MIB to represent system GUID.
Logging	Added support for event notification to monitor. Refer to Event Notification chapter in the User Manual.
User Interfaces	Improved login timeout mechanism.
Event Notifications	Port up/down event notification to log or terminal. Refer to Event Notification chapter in the User Manual.
Release 3.3.3706	
General	Bug fixes.
Release 3.3.3704	
VPD	Changes to VPD block 1 capability bits.
Release 3.3.3702	
EHCM	Added detailed reasons for failure of CMM upgrade feature.
EHCM	Added fingerprint support for CMM update feature.
EHCM	Image bank 1 represents the active image and image bank 2 represents the non-active image.
VPD	Boot Rom will be reported in image segment 1.
WebUI	Security enhancements.
Release 3.3.3500	
EHCM	Enhancements to software update using CMM feature.
Release 3.3.3400	
EHCM	Added fwImageProtocols OIDs support.
Release 3.3.3000	
General	New Linux kernel 2.6.32.

Table 3 - IBM SX90Y3452 Changes and New Features

Category	Description
WebUI	Applied new Apache version. Added temperature critical and warning thresholds to temperature graph.
Software Management	Added support for fetching image from TFTP server using IPv6.
U-boot	Updated u-boot - memory access optimization.
Unbreakable Links	Added Link Level Retry (LLR) support for InfiniBand interfaces.
Modules	Added support for the Mellanox LR4 module, P/N MC2210511-LR4.
Network Interfaces	Added interface range support. By using the interface range configuration mode, a range of ports can be easily configured with the same parameters.
SNMP	SNMP MIB enhancements. General MIBs: Entity-MIB, Entity-Sensor-MIB, Entity-State-MIB and Private MIB restructuring for InfiniBand systems.
Release 3.2.0596	
WebUI	Added support for internal ports in WebUI.
Chassis Management	Added I ² C stability protection.
Configuration Management	Removed “jump-start configuration wizard” feature.
Interfaces	Quality enhancement to link initialization.
System Management	Fixed NTP vulnerability issue.
U-boot	Updated u-boot version.

4 Known Issues



For hardware issues, please refer to the switch support product page.

The following table describes MLNX-OS® known issues in this software release and possible workarounds.

4.1 General Known Issues

Table 4 - General Known Issues (Sheet 1 of 4)

Index	Category	Description	Workaround
1.	Management Interfaces	DHCPv4/v6, VLAN, Zeroconf are not supported on IPoIB.	N/A
2.	Management Interfaces	When re-enabling interface ib0, MTU settings are not saved.	Manually configure MTU settings after re-enabling interface ib0.
3.	Management Interfaces	The CLI command <code>ip default-gateway <interface></code> sets the gateway address to 0.0.0.0 and prevents the user from adding other gateways.	Delete the entry by using the <code>no ip default-gateway</code> command.
4.	Management Interfaces	The switch may have an expired HTTPS certification.	Generate a new certificate by changing the hostname.
5.	Management Interfaces	Consecutive hostname modification is not supported.	Wait 25 seconds before reattempting to modify the hostname.
6.	Management Interfaces	DHCP is supported only when both servers run Linux OS.	N/A
7.	NTP	The command <code>show ntp</code> always lists the last configured NTP server even if it has been deleted. This output can be safely ignored.	N/A
8.	Software Management	Only one image is allowed to be copied into the system (using the <code>image fetch</code> command). The user must remove old image files prior to fetching a new one.	N/A
9.	Configuration Management	Loading the wrong system configuration file may hang the system. For example: an attempt to use an SX1016 configuration file on an SX6036/SX6536/SX1035 system may cause the system to hang.	N/A

Table 4 - General Known Issues (Sheet 2 of 4)

Index	Category	Description	Workaround
10.	Configuration Management	After loading a new configuration file, please reboot the system. Otherwise, configuration may not be properly applied and errors may appear in the log.	N/A
11.	Configuration Management	The command set <code>revert {factory [keep-basic keep-connect] saved}</code> is removed.	Use the equivalent CMM command instead.
12.	Configuration Management	Merging two binary configuration files using the command <code>configuration merge</code> is currently not supported.	Use the configuration text file “Apply” option instead.
13.	Configuration Management	When using a large set of configuration files, configuration apply can take more time than usual due to parallel activity of statistics data collecting.	N/A
14.	Configuration Management	Applying a configuration file of one system profile to another is not supported.	N/A
15.	Logging	“DROPPED MSG” errors may appear during reload (shutdown phase). These errors can be safely ignored.	N/A
16.	Logging	The warning “pgm_set_timeout” may appear in the log. This warning can be safely ignored.	N/A
17.	Logging	During system de-init, the error “[mdreq.ERR]: init(), mdr_main.c:634, build 1: Error code 14014” may appear in the log. This error can be safely ignored.	N/A
18.	Logging	The warning “[mgmtd.WARNING]: Upgrade could not find node to delete: /iss/config/stp/switch/ethernet-default/spanning-tree/mode” may appear in the log. This warning can be safely ignored.	N/A
19.	Logging	When using a regular expression containing (OR) with the command <code>show log [not] matching <reg-exp>]</code> , the expression should be surrounded by quotes (“<expression>”), otherwise it is parsed as filter (PIPE) command.	N/A
20.	Logging	Port up/down events on a port quickly toggling states may be displayed in wrong order in the monitoring terminal.	For actual port stats, use the command <code>show interface</code> .

Table 4 - General Known Issues (Sheet 3 of 4)

Index	Category	Description	Workaround
21.	User Management	Some RADIUS and TACACS+ configurations keep the user locked out of the machine due to timeout limitation.	Press the reset button for 15 seconds, and then log in using your local authentication. Additionally, fix the configuration to avoid any future timeout issues.
22.	User Management	Logging into the system as USERID from the Serial Connection results in login failure the first attempt.	Log in again. The second attempt will result is successful login.
23.	WebUI	Reversing the time clock can result in WebUI graphs' corrupted data.	Clear the graphs data after setting the clock.
24.	WebUI	Enabling/disabling HTTPS while connected via HTTP to the WebUI may result in temporary loss of connection to the webpage.	Refresh the page or navigate back using the browser's back button.
25.	WebUI	Accessing the WebUI via Firefox with HTTPS is unsupported when working with SSL cipher TLS1.2 level.	Access the WebUI with Firefox only through HTTP.
26.	WebUI	Switching between binary configuration files when connected to the WebUI using HTTPS might result in the following message being displayed: "Switched configuration to '***', which was already the active database." This message is incorrect and can be safely ignored.	N/A
27.	CLI	Up to 50 simultaneous CLI sessions are supported.	N/A
28.	CLI	Command output filtering does not support the following commands: <ul style="list-style-type: none">• show log• show configuration text files <file>	N/A
29.	SNMP	The error "Cannot find module (MELLA-NOX-MIB)" may appear in the log when performing rollback to a MLNX-OS version older than 3.3.3000. This error can be safely ignored.	N/A

Table 4 - General Known Issues (Sheet 4 of 4)

Index	Category	Description	Workaround
30.	SNMP	Upon system shutdown, the following error may appear: “[mibd.ERR]: mdc_foreach_binding_prequeried_parsed(), mdc_main.c”. This error can be safely ignored.	N/A
31.	Chassis Management	Upon reaching critical thermal threshold, SR bit 2 is not set although the system is shut down and SR bit 3 is set instead.	N/A

4.2 InfiniBand Known Issues

Table 5 - InfiniBand Known Issues

Index	Category	Description	Possible Workaround
1.	InfiniBand Interfaces	Port hardware speed and width capabilities settings affect port speed and width admin capabilities.	N/A
2.	InfiniBand Interfaces	Setting the port width to 1x in the WebUI and/or CLI is currently not supported.	N/A
3.	InfiniBand Interfaces	Port received packets counter may show random a value when the port is down.	N/A
4.	SNMP	ifPhysAddress OID returns the prefix of the Node GUID of the ib0 management.	N/A

5 Bug Fixes

The following table describes MLNX-OS® bug fixes in this software release.

Table 6 - Bug Fixes

Index	Category	Description
1.	CMM	Inconsistent switch firmware information communicated to CMM.
2.	CMM	After CMM reboot, IBM I/O module is indicated as communication offline and the following error message appears: “internal proprietary mgmt. protocol offline”.
3.	Configuration Management	Upgrade failing with unreachable IP and fingerprint, which blocks next upgrade command from CMM CLI.
4.	mDNS	Running the command <code>no ha dns enable</code> causes slower login time to the switch system and prints clustered error to the log.
5.	Security	Vulnerability to data injection across a session or a DoS (use-after-free and parsing error) via an SSL connection in a multi-threaded environment (CVE-2010-5298).
6.	Security	Buffer overflow via invalid DTLS fragment (CVE-2014-0195).
7.	Security	NULL pointer de-reference and application crash (CVE-2014-0198).
8.	Security	Vulnerability to a DoS via a DTLS hello message in an invalid DTLS handshake (CVE-2014-0221).
9.	Security	SSL/TLS MITM vulnerability (CVE-2014-0224).
10.	Security	Client-side DoS when using anonymous ECDH (CVE-2014-3470).
11.	Security	Shellshock, or Bashdoor, security bug in Unix Bash shell disclosed on 24 September 2014 (CVE-2014-6271).
12.	SNMP	Missing indexes are not consistent between <code>entPhysicalTable</code> , <code>entPhySensorTable</code> , and <code>entStateTable</code> .
13.	SNMP	<code>ifTable</code> , <code>ifXtable</code> , and <code>mellanoxIfVPITable</code> may return unexpected “No Such Instance”.

6 Submitting a Service Request

The Mellanox® Support Center is at your service for any issues. You may access the Warranty Service through the Web Request Form by using the following link:

http://www.mellanox.com/content/pages.php?pg=support_index.